DOCUMENT RESUME

ED 028 672 FL 001 226

By-Bartley, Diana E.

A Pilot Study of Aptitude and Attitude; Factors in Language Dropout.

Palo Alto Unified School District, Calif.; Stanford Univ., Calif. Stanford Center for Research and Development in Teaching.

Pub Date [68]

Note-13p.

EDRS Price MF-$0.25 HC-$0.75

Descriptors-Academic Aptitude, Articulation (Program), Dropout Identification, *Dropout Problems, *Dropout Research, Grade 8, Graphs, *Junior High School Students, Language Ability, *Language Enrollment, Language Learning Levels, *Language Programs, Language Tests, Second Language Learning, Sequential Learning, Student Attitudes

Identifiers-California, Foreign Language Attitude Scale, Modern Language Aptitude Test, Palo Alto Unified School District

In an attempt to deal with the current foreign language enrollment and learning problems created by the number of students who discontinue foreign language study after the sixth to eighth grade learning sequence, this pilot study seeks to identify, through the use of the Modern Language Aptitude Test and the Foreign Language Attitude Scale with experimental groups of eighth grade students, the extent to which aptitude and attitude contribute to the dropout problem. Described in the report are the (1) research methods employed, (2) materials and testing procedures used, and (3) results obtained. Histograms based on percentages compare group performances. Also included is an analysis of results. (AF)

ED028672

A Pilot Study of Aptitude and Attitude Factors in Language Dropout*

Diana E. Bartley

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The increasing language enrollment in the lower grades, especially in California[1], has caused foreign language educators more headaches than they had ever expected, bargained for or dreamed about. Articulation problems, courses of study, the demand for more teachers, the drop-out rate after 8th grade are only a few of the more salient problems that teachers and administrators must cope with today.

The situation which will be dealt with here concerns the number of students who after the eighth grade do not continue to study the foreign language which they had studied since the sixth grade. This phenomenon can be termed as the "foreign language drop-out" problem.

The most salient reasons for considering the drop-out rate a problem are intrinsically related to 1) the learning experience and 2) enrollment. In terms of the learning experience of the students and in terms of the future enrollment of classes, continuous study from sixth through eighth grades would constitute an ideal situation. Dropping a foreign language then, in the midst, would constitute a problem. The learning experience of the student would obviously be enhanced by continuous study of the foreign language over a period of years in order to achieve mastery of the

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*The author acknowledges the support given by the Palo Alto Unified School District in particular Dr. Nicholas Anastasiow, former research director Mrs. Fernande Inan, Dr. Frank Seeley. The author also acknowledges the assistance of the Stanford Center for Research and Development in Teaching and is especially grateful to her advisor, Professor Robert L. Politzer, Research and Development Associate and Professor of Education and Romance Linguistics, Stanford University for valuable suggestions.

basic skills of language learning. Studying the foreign language for three years does not seem sufficient expecially at the sixth, seventh and eighth grades during which time students usually do not complete more than one level of a foreign language.[2] In terms of the future enrollment in foreign language classes, a drop-out of many students in eighth grade, or even later grades, would create such small classes at the secondary school level that many districts would not find it financially feasible to open these classes.

The study described below was conducted in order to make an attempt at the identification of the extent to which aptitude and attitude are two of the possible causes for dropping the foreign language after the eighth grade. For the purposes of this study, aptitude was measured by the MLAT which "is useful in predicting success in learning to read, write and translate a foreign language."[3] A student's attitude is described as his disposition, favorable or unfavorable, toward the language which he is studying.

The method used in the study was as follows:

Sample: Two groups of students were used in the study. One group consisted of all of those eighth grade students who had chosen not to continue foreign language in the ninth grade, henceforth called group 1 (N = 98). The second group consisted of a random sample of eighth graders who had included foreign language in their ninth grade schedules, henceforth called group 2 (N = 73). The subjects were members of an entire eighth grade class in one junior high school in the Palo Alto Unified School District which is comprised of three junior high schools and three senior high schools. The city served by this school district is adjacent to a major university

and has a population of approximately 58,000. The large majority of the students attending the school live in the older residential section of the city and for the most part, come from homes where the parents have been educated thru the college level. The majority of the students in this district tend to continue their education in one form or another after graduation from high school. Of the 87% of the students in the 1964 graduating classes who answered the questionnaires in a follow-up study conducted by the Guidance Department of the Palo Alto Unified School District, 84% continued their education at the university level, 11% entered full-time employment or were married and 5% entered military service or technical training schools. The median family income in this city is equal to $9,132.[4]

Materials used and testing procedure. The short form of the Carroll-Sapon Modern Language Aptitude Test[5] and the Foreign Language Attitude Scale[6] were administered to both groups.

The Modern Language Aptitude Test consists of five parts which measure different traits. Part I, Number Learning measures the memory component while Part V, Paired Associates, measures the rote memory aspect of foreign language learning. Part II, Phonetic Script and Part III, Spelling Clues, test the ability to relate sounds to symbols. Sensitivity to grammatical structures is tested in Part IV, Words in Sentences. Maximum score possible is 192.

The Foreign Language Attitude Scale, a likert-type scale, consists of 30 items in which students are to indicate the statement which best describes their disposition.

Sample item:

"The Spanish I've learned is useful to me.

1 not at all
2 a little bit
3 quite a bit
4 very much"[7]

The number of the choice circled equals the score received on the item. Maximum score per item = 4. Maximum possible score on the entire test is 120. The scale "was developed in response to a need for a scientific means of measuring one attitude of elementary school children in the intermediate grades toward the study of Spanish."[8] Reliability of the scale (.87) was established on a test - re-test administered to four classes in a sample of 1,000 students in grades four through six. Reliability of the use of the test with this sample is presented below. " 'Face validity' is ascribed to the scale by virtue of the questions asked and the agreement on their validity by the judges who selected them."[9]

The MLAT and the Foreign Language Attitude Scale were administered on two successive days. Group 2 was tested the first day, group 1 was tested the second day. Group 1 was asked to follow an honor code stating that they would not discuss any aspect of the testing experience with Group 2 until they had finished the test. During each testing session, the short form of the Modern Language Aptitude Test was administered first immediately followed by the Foreign Language Attitude Scale. The entire testing session lasted approximately one hour and a half.

Data Analysis. The reliability of the Foreign Language Attitude Scale was obtained.

N	r**	S.D.	$\bar{x}$
188*	0.924	15.69	67.45

*unbiased estimate of the variance was used
** r = Cronbach Alpha

Also, the assumption was made that the odd-even reliability coefficients obtained on the short form of the Carroll-Sapon Modern Language Aptitude Test with ninth grade subjects would not be significantly different from students terminating the eighth grade (Males: r= .83: Females: r = .86).[10] And at the same time it is also assumed that predictive validity for the ninth grade would not be significantly different from the eighth grade at the end of the last semester.

In order to ascertain whether or not significant differences between the attitude and the aptitude scores of the two groups did in fact exist, a t-test was used.[11]

Histograms were used in order to show a more exact relationship between aptitude and each of the groups and attitude and each of the groups. The ogives which have also been included illustrate the conversion of raw scores to percentile ranks and the first, second and third quartiles.

Results.

The following results with regard to the differences in aptitude were obtained.

Aptitude:

	N	$\bar{x}$	S.D.
Group 1 not continuing	73	80.32	21.69
Group 2 continuing	98	98.14	21.47

$t = 5.+$ $\alpha = .001$

The following results with regard to the differences in attitude were obtained:

Attitude:

	N	$\bar{x}$	S.D.
Group 1 <u>not</u> continuing	73	61.18	15.35
Group 2 continuing	98	70.96	14.87

$t = 3.74$ $\mathcal{L} = .05$

The following histograms and ogives are also illustrative of the aptitude and attitude differences between the two groups.

Table 1

Histograms of attitude scores based on percentages

Legend

Group 1 — — —

Group 2 ———

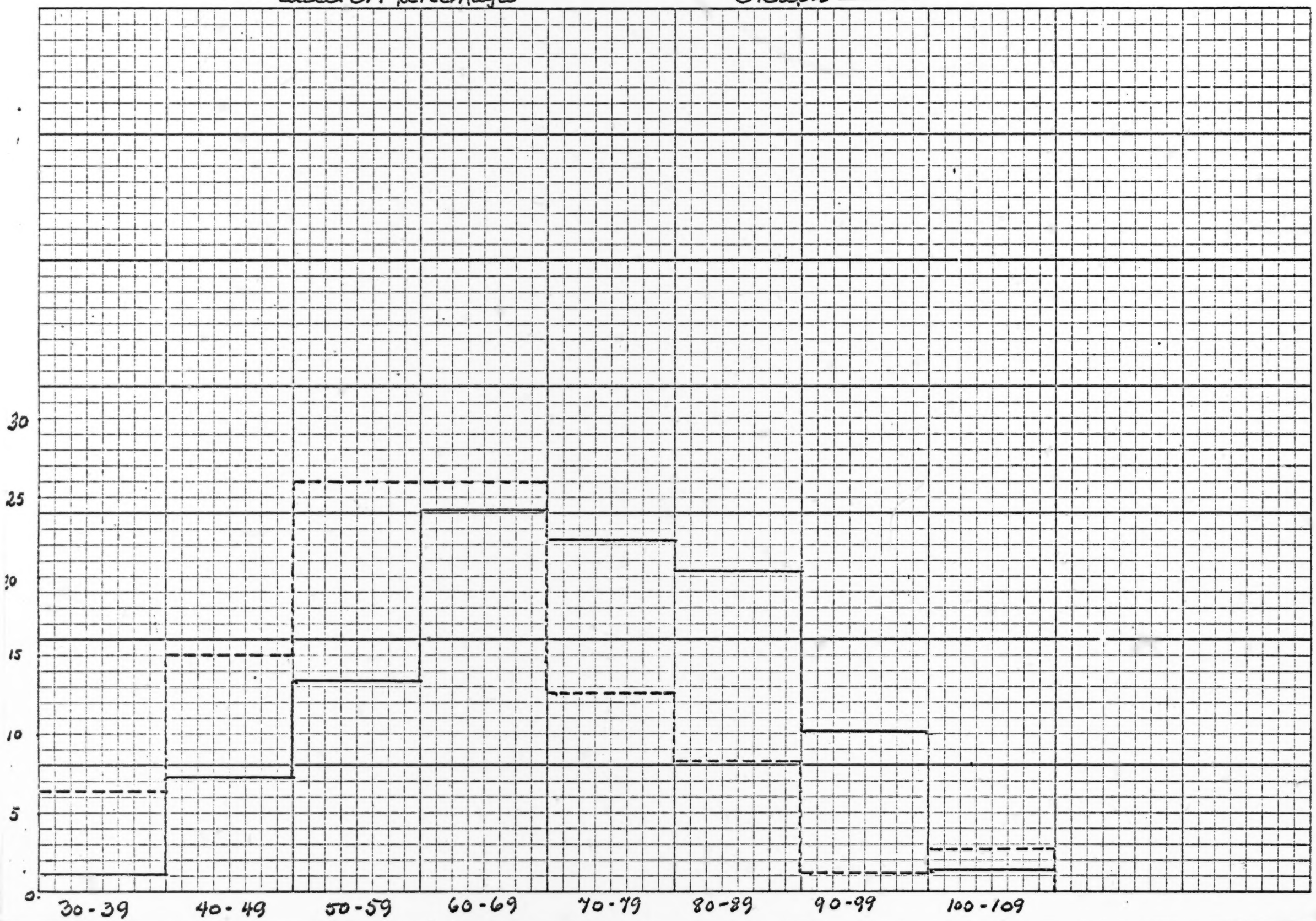


Table 2
Histograms of aptitude scores
based on percentages

Legend
Group 1 — — —
Group 2 ——

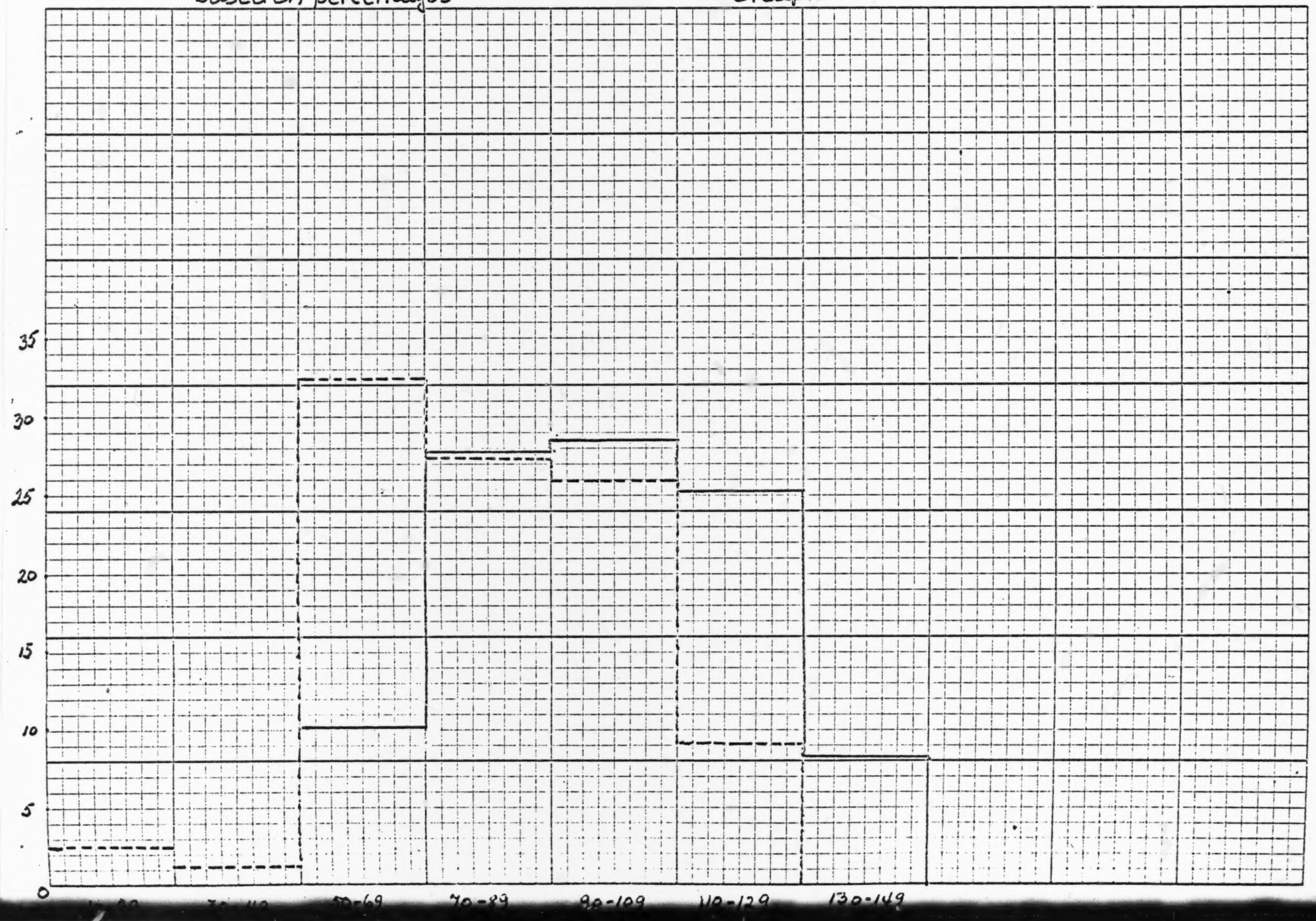


Table 3

group1

Ogive for the distribution of group 2 attitude scores

Legend:
Group 1 : ---
Group 2 : ——

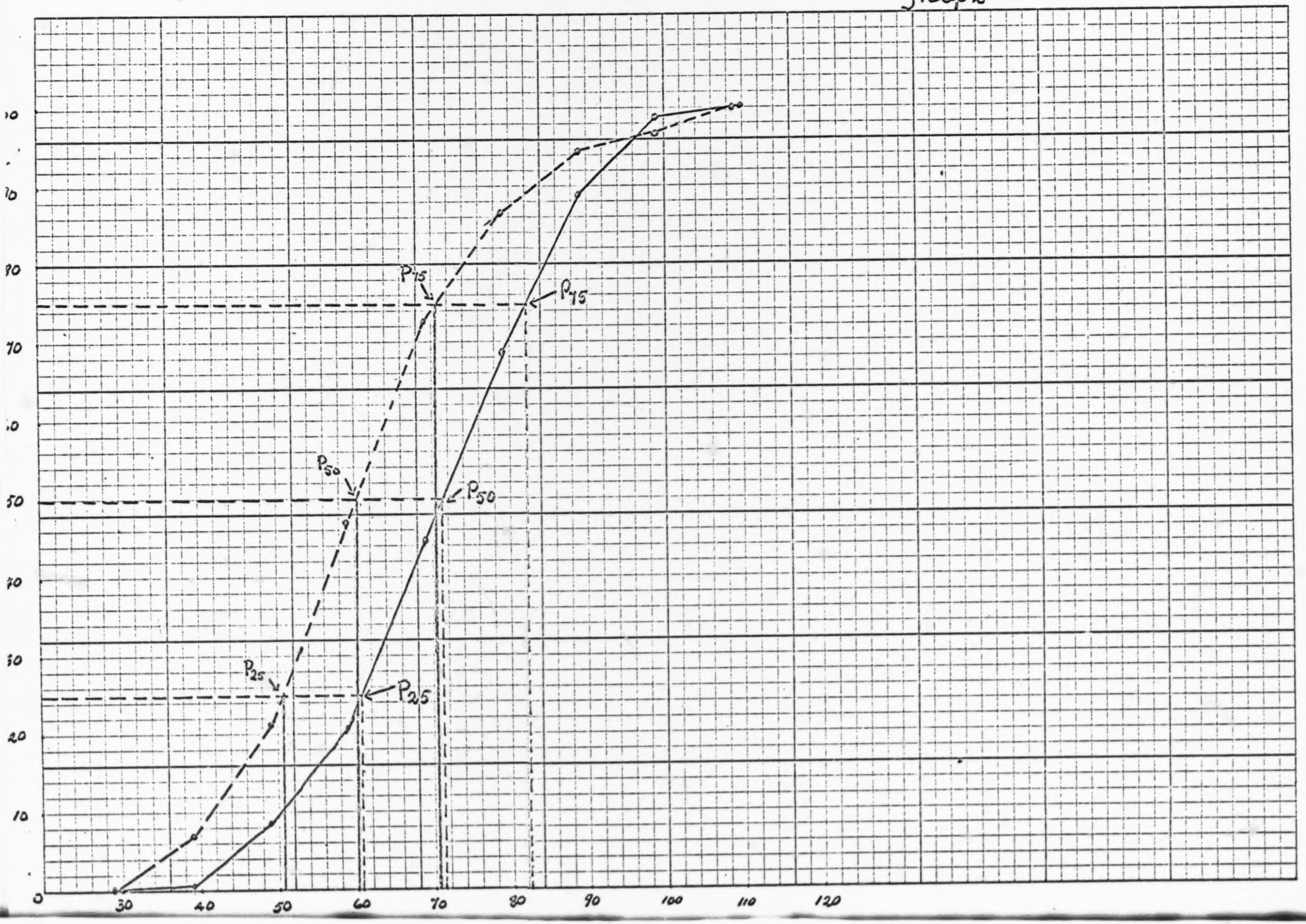
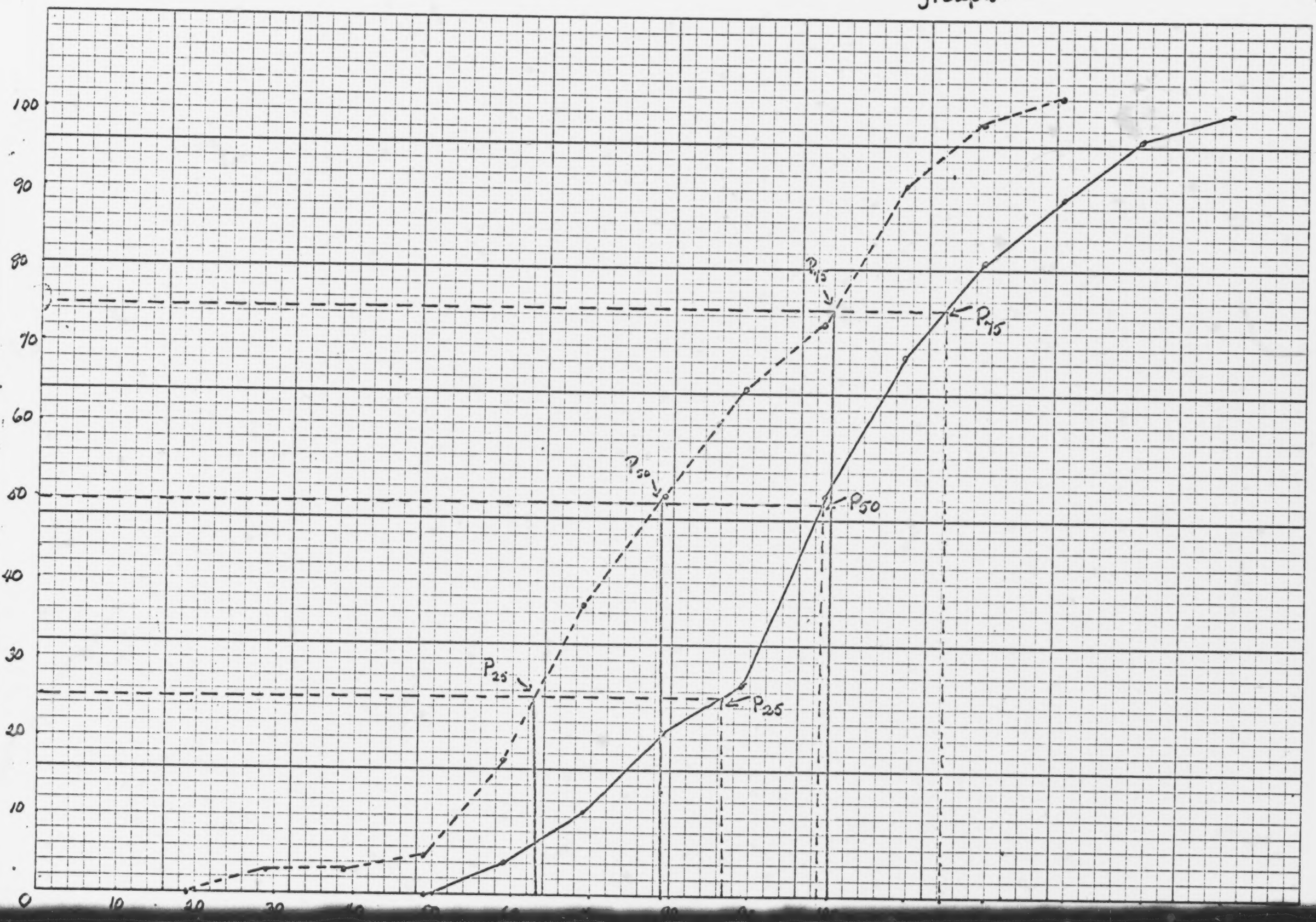


Table 4

Ogive for the distribution of group 1 and group 2 aptitude scores

Legend:
Group 1: - - -
Group 2: ——



Interpretations and Conclusions

Histograms based on percentages were used to compare the two groups in terms of attitude and aptitude. In both cases, the majority of students in group 2 scored on the average 20 points higher than the majority of students in group 1.

The ogives used illustrate that the overall relationship of the raw scores and percentages for group 1 on both aptitude and attitude is lower and the percentage of students in group 1 who obtained low scores on both measurements is greater in the drop-out group. The median on the aptitude measurement indicates a 20 point difference between both groups on the average. The difference between the medians on the attitude tests between both groups is 12 points.

The significant differences between both groups on the aptitude and attitude tests and the information yielded by the histograms and ogives represent an initial step in the formulation of our ideas as to what two of the causes of the eighth grade drop-out rate might be. In light of the size and uniformity of the sample and only one administration of the measurements, it is evident that the results can only be generalized to a comparable sample. However, it is submitted that in all probability these factors are indeed playing a decisive role.

While keeping the nature of the school district in mind, one can further try to analyze the results. As has been previously mentioned, in the Palo Alto Unified School District, 84% of the 1964 graduating class out of the 87% who answered the questionnaire continued their education after graduation from high school. Such a high percentage would indicate that Palo Alto is not a typical school district and, therefore, it might be speculated that in other districts where the college-bound population

is lower, there could be an even wider gap between the two groups, with a higher percentage of students being found in group 1, i.e., those students not continuing in foreign languages.

Implications with respect to the elementary school situation may also be pointed out. The students used in the sample were in junior high school. The majority of these had studied a foreign language in the elementary school. In glancing over the results, it could be hypothesized that their experience in the elementary school affected their wish to continue or drop the foreign language after further study in the junior high school. The aptitude factor could then be considered for those students entering foreign language courses at the junior high school level. Students who by virtue of the aptitude tests appeared to lack one or more components of aptitude, could undergo remedial training if it could be shown that aptitude itself is subject to training.* Attitude factors can also be considered. By using the attitude scale as a means of detecting low scorers, the reasons for these low scores signalling a poor disposition could then be investigated thereby helping the student in question.

It is hoped that this short study can serve as a model for similar testing projects in those schools which may be experiencing an analogous situation. Once it is established through further research to what extent the aptitude and attitude factors influence drop-out rate, then perhaps the matter can be analyzed more specifically. Relative questions would be: Is it the instructional methodology, the language itself or, perish the thought, the teacher, that leads to undesireable attitudes on the part of the students? Is there any lack of training in the students' previous schooling that would contribute to a deficiency in one or more of the components of foreign language attitude?

Footnotes

[1]See John P. Dusel, "A Look at California Foreign Language Enrollment," Foreign Language Newsletter, XV (October, 1966), 2.

[2]For a discussion of levels in language learning and their implications, See Nelson Brooks, Language & Language Learning, 2nd. Ed., (New York, 1964), pp. 119-126.

[3]John B. Carroll and Stanley M. Sapon, Modern Language Aptitude Test Manual, (New York, 1959), p. 3.

[4]U.S. Department of Commerce, Bureau of Census. U.S. Census of Population, 1960, California General and Social Economic Characteristics, (Washington, D.C., 1960), Table 76, pp. 6-358.

[5]John B. Carroll and Stanley M. Sapon, Modern Language Aptitude Test (New York, 1955).

[6]Mary R. Dufort, "Foreign Language Attitude Scale -- Spanish", copyrighted mimeograph, 1962. By permission of the author, this scale was adapted to French, German and Latin.

[7] DuFort, ibid. p. 2, item 14.

[8]Mary R. DuFort, Instruction Sheet "Foreign Language Attitude Scale -- Spanish", copyrighted mimeograph, 1962.

[9]DuFort, ibid.

[10]John B. Carroll and Stanley M. Sapon, op. cit., p. 17.

[11]Difference between independent means formula in Quinn McNemar, Psychological Statistics (New York, 1949), pp. 102-103.